

REMARKS

Claims 3-4 and 14-18 are cancelled without prejudice to their renewal in a subsequently filed patent application. New claim 19 is added. Therefore, claims 1-2, 5-13, and 19 are pending.

Claim 1 was amended to incorporate the limitation of cancelled claim 4. Claims 12 and 13 are amended to be consistent with claim 1. New claim 19 is supported in the specification at page 2, lines 19-20.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

Rejections Under 35 USC § 103(a).

Claims 1-13 were rejected as obvious over Kweon et al. in view of Olesen (WO 91/04669), Inoue et al., and Carroll et al. Claims 3-4 are cancelled. This rejection is respectfully traversed as it may be applied to amended claim 1, and claims 2 and 5-13.

The Examiner has the initial burden of establishing a *prima facie* case of obviousness. A finding of obviousness under § 103 requires a determination of the scope and content of the prior art, the differences between the claimed invention and the prior art, the level of ordinary skill in the art, and whether the differences are such that the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. Graham v. Deere, 383 US 1 (1966). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion that the combination be made. In re Stencel, 828 F2d 751, 4 USPQ2d 1071 (Fed. Cir. 1987).

The invention as claimed. Amended claim 1 is drawn to a process for preparing a dough or a baked product prepared from the dough, comprising adding to the dough an anti-staling maltogenic alpha-amylase and a phospholipase.

The Kweon et al. reference as a whole. Kweon et al. describe the effect of adding a phospholipid hydrolysate and antistaling maltogenic alpha-amylase (Novamyl®) on starch retrogradation in bread.

The Olesen et al. reference as a whole. Olesen et al. describe a process for retarding the staling of bread by the addition of a maltogenic amylase (Novamyl®) to dough.

The Inoue et al. reference as a whole. Inoue et al. describe a bread improver comprising phospholipase A.

The Carroll et al. reference as a whole. Carroll et al. describe a method of retarding bread staling by the addition of an alpha-amylase and a pullulanase.

The analysis under § 103(a). Applicants submit that none of the cited prior art references, alone or in combination, render the claimed invention obvious because none of

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them describe or suggest the combined addition of maltogenic alpha-amylase and a phospholipase. Accordingly, the Examiner has not established a *prima facie* case of obviousness.

Further, Applicants submit that even if a *prima facie* case is assumed to have been established, which Applicants do not concede, such a *prima facie* case would be overcome by the unexpected results achieved with the instant invention. While it is known that a maltogenic alpha-amylase is useful to retard long-term staling, the prior art did not realize that the short-term effect of a maltogenic alpha-amylase was to cause bread to be harder within the first 24 hours following baking. The prior art simply did not look at crumb firmness at less than 24 hours. It is only in the instant invention that the short-term hardening effect of maltogenic alpha-amylase was noticed. Prior to the instant invention, the problem created with the use of maltogenic alpha-amylase was simply not realized. However, the instant inventors were able to solve the problem with the addition of a phospholipase. Thus the long-term benefit of maltogenic alpha-amylase is retained, but the short-term hardening effect is overcome. This realization is not described or suggested in the combined prior art references.

Applicants direct the Examiner's attention to the table in Example 1. At 2 hours after baking, crumb firmness in the control bread is 296, whereas the addition of maltogenic alpha-amylase causes crumb firmness to increase to 469. However, the inclusion of phospholipase with the amylase reduces initial hardness to 248-316. Thus, the combination of maltogenic alpha-amylase and phospholipase achieves the desired effect of improving long term softness, and overcomes the short-term problem of increased hardness caused by the addition of maltogenic alpha-amylase alone.

Accordingly, Applicants submit that in light of the above remarks and amendments, the claims overcome this rejection under 35 U.S.C. 103. Applicants respectfully request reconsideration and withdrawal of the rejection.

Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to

contact the undersigned by telephone if there are any questions concerning this amendment or application.

Respectfully submitted,

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